

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

ORDER NO. 87-062

UPDATED REQUIREMENTS FOR:

CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO PORT COMMISSION  
PIER 98 CLASS III LANDFILL

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter called the Board), finds that:

1. The City and County of San Francisco, San Francisco Port Commission, (hereinafter called the discharger) submitted a Report of Waste Discharge dated July 22, 1970 to obtain waste discharge requirements for the filling of approximately 48 acres of India Basin in San Francisco Bay; to create a maritime terminal. This area is known as Pier 98. The Board adopted Resolution No. 70-69 on August 27, 1970 prescribing waste discharge requirements for this fill operation. This Order is an update of Resolution No. 70-69 pursuant to Title 23, Chapter 3, Subchapter 15 of the California Administrative Code (Subchapter 15).
2. The landfill was constructed by removing approximately 1,840,000 cubic yards of bay mud and the disposing approximately 3 million cubic yards of debris, dredge spoils, and clean fill into the bay. No waste that is required to be disposed of in a Class I or Class II disposal site was to be disposed of at this landfill. There is documentation that such wastes have been disposed of at this landfill. See attachments A and B, which are hereby incorporated as a part of this Order, for a plan and section view of the landfill. Since the landfill was constructed by disposing wastes into the bay the groundwater beneath the landfill is the bay water that infiltrates into the landfill and saturates the landfill below the elevation of the surrounding bay water. Since this water is in contact with fill material there is a potential for leachate generation within the landfill.
4. The non-inert wastes in the landfill have caused leachate and contaminated runoff to be discharged to the bay surrounding the landfill. At the present time there is no visual evidence of leachate being discharged to the bay. However, there has been no actual water quality monitoring to demonstrate that leachate is not being discharged to the bay. Because of the construction of this landfill that involved placement of wastes below the water level of the bay there is a potential for leachate to be discharged to the bay. In addition the landfill has not been properly closed so there are areas of ponded water, as well as rainwater, that infiltrate into the waste fill and generate leachate. Leachate generated within the landfill could be saturating the surrounding bay sediments at low tide and seeping into the bay in a manner that would not be visually noticeable.

5. This landfill is an existing facility pursuant to Section 2510(d) of Subchapter 15 and does not meet the siting criteria for a Class III landfill as cited in Sections 2530(c) and 2533.
6. Surface runoff from the site is discharged to San San Francisco Bay.
7. The beneficial uses of San Francisco Bay surrounding the landfill are:
  - a. Navigation
  - b. Water Contact Recreation
  - c. Non-Contact Water Recreation
  - d. Ocean Commercial and Sport Fishing
  - e. Wildlife Habitat
  - f. Preservation of Rare and Endangered Species
  - g. Fish Migration
  - h. Fish Spawning
  - i. Shelfish Harvesting
  - j. Estuarine Habitat
8. The discharger has not submitted a closure plan to close the landfill according to the requirements of Article 8 of Subchapter 15, and the landfill is not properly closed.
9. The Board adopted a revised Water Quality Plan for the San Francisco Bay Basin on December 17, 1986, and this Order implements the water quality objectives stated in that plan.
10. This project constitutes a minor modification to land in order to properly close an existing landfill, with changes to meet public health and safety standards, and is therefore categorically exempt from the provisions of the California Environmental Quality Control Act (CEQA) pursuant to Sections 15301 and 15304 of the Resources Agency Guidelines.
11. The Board has notified the discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge, and has provided them with an opportunity to submit their written views and recommendations.
12. The Board in a public meeting heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the City and County of San Francisco, San Francisco Port Commission, and any other persons that currently or in the future own this land or operate this facility, shall meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder and shall also comply with the following:

A. PROHIBITIONS

1. The disposal of waste shall not create a pollution or nuisance as defined in Section 13050(m) of the California Water Code.

2. No hazardous, designated, or non-hazardous decomposable or water soluble wastes of any type shall be disposed of at this site.
3. The discharger, or any future owner or operator of this site, shall not cause the following conditions to exist in waters of the State at any place outside the waste management facility:
  - a. Surface Waters
    1. Floating, suspended, or deposited macroscopic particulate matter or foam.
    2. Bottom deposits or aquatic growth.
    3. Alteration of temperature, turbidity, or apparent color beyond natural background levels.
    4. Visible, floating, suspended or deposited oil or other products of petroleum origin.
    5. Toxic or other deleterious substances to be present in concentrations or quantities which may cause deleterious effects on aquatic biota, wildlife or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentrations.
4. Leachate from wastes and ponded water containing leachate or in contact with refuse shall not be discharged to waters of the State or the United States.

B. SPECIFICATIONS

1. Water used during closure operations shall be limited to a minimal amount necessary for dust control.
2. The site shall be protected from any washout or erosion of wastes or covering material and from inundation which could occur as a result of a 100 year 24 hour precipitation event or as the result of tidal action.
3. The leachate monitoring and control system to be installed shall be maintained and operated to prevent the buildup of hydraulic head in the landfill that would cause leachate to migrate into the bay. This system shall be inspected monthly, and any accumulated fluid shall be removed.
4. The discharger shall ensure that the foundation of the site, the refuse fill, and the structures which control leachate, surface drainage, erosion and gas for this site are constructed and maintained to withstand conditions generated during the maximum probable earthquake.


5. The exterior surfaces of the landfill shall be graded, and maintained, to a minimum slope of three percent in order to promote lateral runoff of precipitation and prevent ponding of water on the landfill. In addition, all completed disposal areas shall be covered with a minimum of 4 feet of cover and meet other applicable requirements as described in Article 8 of Subchapter 15.
6. The discharger shall install any additional groundwater and leachate monitoring devices required to fulfill the terms of any Self-Monitoring Program issued to the discharger in order that the Board may evaluate compliance with the conditions of this Order.

C. PROVISIONS

1. The discharger shall comply with all Prohibitions, Specifications, and Provisions of this Order immediately upon adoption.
2. The discharger shall submit a proposal, by January 1, 1988, to install leachate and groundwater monitoring wells that will define the extent of the waste oil in the landfill, the quantity and quality of leachate within the landfill, and to determine if leachate is migrating into the bay and bay sediments surrounding the landfill.
3. The discharger shall implement the proposal submitted under Provision #2 above by June 1, 1988 and submit a report of the collected data, including the boring and well logs and all analysis results, by September 1, 1988.
4. The discharger shall submit a closure plan, by January 1, 1989, that will provide for the closure of the landfill according to the requirements of Articles 5 and 8 of Subchapter 15. The closure plan should include not only plans to cover the landfill but to also provide protection around the site to prevent erosion of the landfill due to tidal action. The plan should also provide for the elimination of ponded water on the landfill. This plan shall include an amended Report of Waste Discharge for the purpose of revising this Order to reflect the site closure and to obtain Board approval of the closure plan and establish water quality protection standards according to the requirements of Article 5 of Subchapter 15. This submittal shall include the locations of two monuments that have been constructed to be used to determine the location and elevation of wastes at the site. This report shall also provide evidence of an irrevocable closure fund, or other means, pursuant to Section 2580(f) of Subchapter 15 to ensure that there are sufficient funds available for the closure and post-closure maintenance and monitoring of this site.
5. The discharger shall file with the Regional Board quarterly self-monitoring reports performed according to any self-monitoring program issued by the Executive Officer.

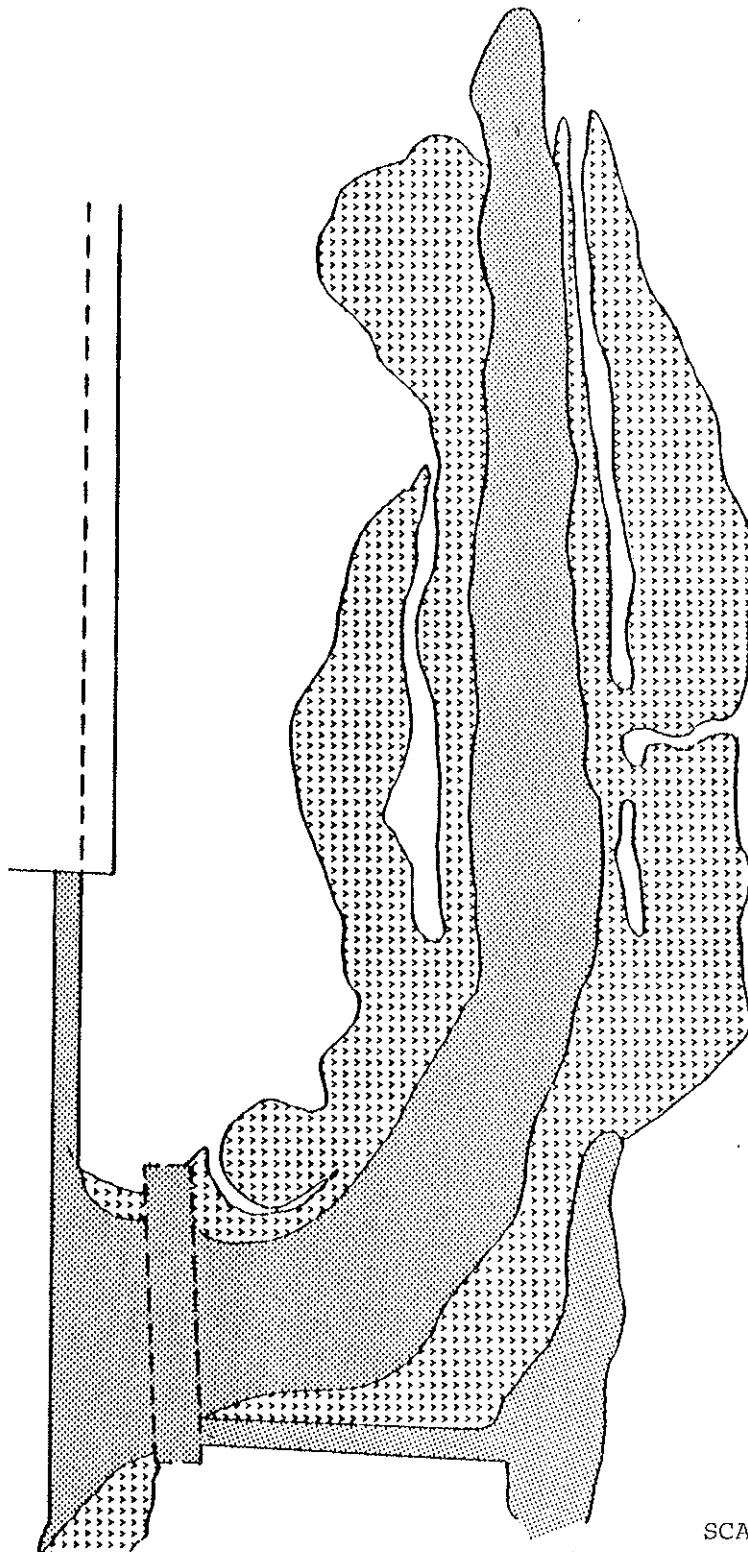
6. All reports pursuant to these Provisions shall be prepared under the supervision of a registered civil engineer or certified engineering geologist.
7. The discharger shall remove and relocate any wastes which are discharged at this site in violation of these requirements.
8. The discharger shall file with this Board a report of any material change or proposed change in the character, location, or quantity of this waste discharge. For the purpose of these requirements, this includes any proposed change in the boundaries of the disposal areas or the ownership of the site.
9. The discharger shall maintain a copy of this Order at the offices of the Port of San Francisco so as to be available at all time to site operating personnel.
10. This Board considers the property owner and site operator to have continuing responsibility for correcting any problems which arise in the future as a result of this waste discharge or related operations.
11. The discharger shall maintain all devices or designed features installed in accordance with this Order such that they continue to operate as intended without interruption except as a result of failures which could not have been reasonably foreseen or prevented by the discharger.
12. The discharger shall permit the Board or its authorized representative, upon presentation of credentials:
  - a. Entry upon the premises on which wastes are located or in which any required records are kept.
  - b. Access to copy any records required to be kept under the terms and conditions of this Order.
  - c. Inspection of any treatment equipment, monitoring equipment, or monitoring method required by this Order.
  - d. Sampling of any discharge or groundwater covered by this Order.
13. This Board's Order No. 70-69 is hereby rescinded.
14. These requirements do not authorize commission of any act causing injury to the property of another or of the public; do not convey any property rights; do not remove liability under federal, state or local laws; and do not authorize the discharge of wastes without appropriate permits from other agencies or organizations.

I, Roger B. James, Executive Officer, do hereby certify that the foregoing is a full, complete, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on June 17, 1987.



Roger B. James  
Executive Officer

Attachments: A) Site map  
B) Cross Section of Landfill  
C) Self Monitoring Program



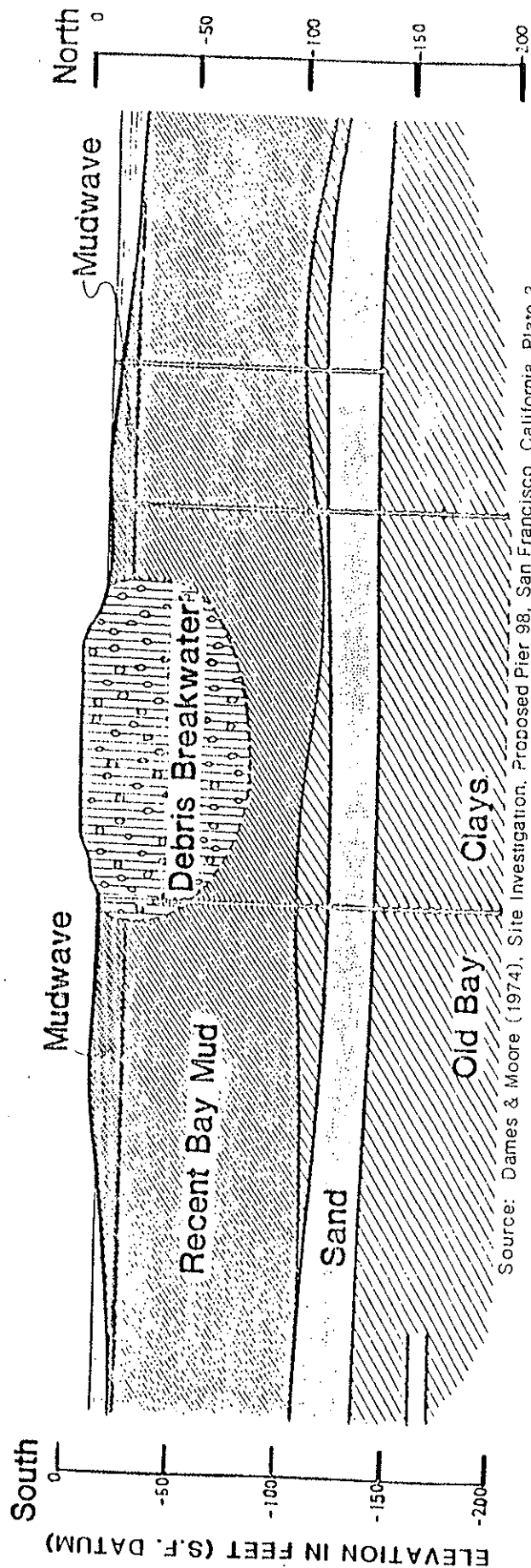
Fill  
Mud Wave

SCALE 1 INCH= 400 FEET

STATE OF CALIFORNIA  
REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

ATTACHMENT A:  
CITY AND COUNTY OF SAN FRANCISCO  
PIER 98 SITE MAP

DRAWN BY:	DATE:	DRWG NO.
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STATE OF CALIFORNIA  
REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

ATTACHMENT B:  
CITY AND COUNTY OF SAN FRANCISCO  
PIER 98 SITE MAP CROSS SECTION

DRAWN BY:

DATE:

DRWG. NO.



CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

CITY AND COUNTY OF SAN FRANCISCO  
PORT OF SAN FRANCISCO  
PIER 98 CLASS III LANDFILL

PART A

A. GENERAL

Reporting responsibilities of waste dischargers are specified in Sections 13225(a), 13267(b), 13383, and 13387(b) of the California Water Code and this Regional Board's Resolution No.73-16. This Self-Monitoring Program is issued in accordance with Section C.5 of Regional Board Order No. 87-062.

The principal purposes of a self-monitoring program by a waste discharger are: (1) to document compliance with waste discharge requirements and prohibitions established by the Board, (2) to facilitate self-policing by the waste discharger in the prevention and abatement of pollution arising from waste discharge, (3) to develop or assist in the development of effluent standards of performance, pretreatment and toxicity standards, and other standards, and (4) to prepare water and wastewater quality inventories.

B. SAMPLING AND ANALYTICAL METHODS

Sample collection, storage, and analyses shall be performed according to the most recent version of Standard Methods for the Analysis of Wastewater.

Water and waste analysis shall be performed by a laboratory approved for these analyses by the State Department of Health. The director of the laboratory whose name appears on the certification shall supervise all analytical work in his/her laboratory and shall sign all reports of such work submitted to the Regional Board.

All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements.

C. DEFINITION OF TERMS

1. A grab sample is a discrete sample collected at any time.

2. Receiving waters(s) refers to any water which actually or potentially receives surface or groundwaters which pass over, through, or under waste materials or contaminated soils. In this case the groundwater beneath and adjacent to the landfill and San Francisco Bay are considered the receiving waters.
3. Standard observations refer to:
  - a. Receiving Waters
    - 1) Discoloration and turbidity: description of color, source, and size of affected area.
    - 2) Evidence of odors, presence or absence, characterization, source, and distance of travel from source.
    - 3) Evidence of beneficial use: presence of water associated wildlife.
    - 4) Weather conditions: wind direction and estimated velocity, total precipitation during the previous five days and on the day of observation.
  - b. Perimeter of the waste management unit.
    - 1) Evidence of liquid leaving or entering the waste management unit, estimated size of affected area and flow rate. (Show affected area on map)
    - 2) Evidence of odors, presence or absence, characterization, source, and distance of travel from source.
    - 3) Evidence of erosion and/or daylighted refuse.
  - c. The waste management unit.
    - 1) Evidence of ponded water at any point on the waste management facility.
    - 2) Evidence of odors, presence or absence, characterization, source, and distance of travel from source.
    - 3) Evidence of erosion and/or daylighted refuse.

4. Standard analysis and measurements refer to:

- a. pH
- b. Electrical Conductivity (EC)
- c. Total Dissolved Solids (TDS)
- d. Total Phenols
- e. Chloride
- f. Total Organic Carbon
- g. Nitrate Nitrogen
- h. Total Kjeldahl Nitrogen.
- i. Water elevation in feet above Mean Sea Level.
- j. Total Petroleum Hydrocarbons
- k. EPA Method 625, identifying all peaks greater than 1 microgram/liter

D. SCHEDULE OF SAMPLING, ANALYSIS, AND OBSERVATIONS

The discharger is required to perform sampling, analysis, and observations according to the schedule specified in Part B, and the requirements of Article 5 of Subchapter 15.

E. RECORDS TO BE MAINTAINED

Written reports shall be maintained by the discharger, and shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Board. Such records shall show the following for each sample:

1. Identity of sample and sample station number.
2. Date and time of sampling.
3. Date and time that analyses are started and completed, and name off the personnel performing the analyses.
4. Complete procedure used, including method of preserving the sample, and the identity and volumes of reagents used. A reference to a specific section of a reference required in Part A Section B is satisfactory.
5. Calculation of results.
6. Results of analyses, and detection limits for each analyses.

F. REPORTS TO BE FILED WITH THE REGIONAL BOARD

1. Written self-monitoring reports shall be filed each calendar quarter by the fifteenth day of the following month. In addition an annual report shall be filed as indicated in F.2 The reports shall be comprised of the following:

a. Letter of Transmittal

A letter transmitting the essential points in each self-monitoring report should accompany each report. Such a letter shall include a discussion of any requirement violations found during the past quarter and actions taken or planned for correcting the violations, such as operation modifications and/or facilities expansion. If the discharger has previously submitted a detailed time schedule for correcting requirement violations, a reference to the correspondence transmitting such schedule will be satisfactory. If no violations have occurred in the last quarter this shall be stated in the letter of transmittal. Monitoring reports and the letter transmitting reports shall be signed by a principal executive officer at the level of vicepresident or his duly authorized representative if such representative is responsible for the overall operation of the facility from which the discharge originates. The letter shall contain a statement by the official, under penalty of perjury, that to the best of the signer's knowledge the report is true, complete, and correct.

b. Each report shall include a compliance evaluation summary sheet. This sheet shall contain:

1. The sample mean and the sample variance for all sample sets taken from all compliance points, and shall determine if the difference between the mean of each sample set and the water quality protection standard is significant at the 0.05 level using Cochran's Approximation to the Behrens-Fisher Student's t-test as described in Appendix II of Subchapter 15. The discharger may propose an alternative statistical procedure to be used in making this determination pursuant Section 2555(h)(3) of Subchapter 15. If a statistically significant difference is found this shall be reported as a suspected requirement violation in the letter of transmittal.

2. A graphic description of the velocity and direction of groundwater flow under/around the waste management unit, based upon the past and present water level elevations and pertinent visual observations.

c. A map or aerial photograph shall accompany each report showing observation and monitoring station locations.

d. Laboratory statements of results of analyses specified in Part B must be included in each report. The laboratory director shall sign the laboratory statement of analytical results.

2. By January 31 of each year the discharger shall submit an annual report to the Regional Board covering the previous calendar year. This report shall contain:

- a. Tabluar and graphical summaries of the monitoring data obtained during the previous year.
  - b. A comprehensive discussion of the compliance record, and the corrective actions taken or planned which may be needed to bring the discharger into full compliance with the waste discharge requirements.
  - c. A map showing the area, if any, in which filling has been completed during the previous calendar year.
  - d. A written summary of the groundwater analyses indicating any change in the quality of the groundwater.
  - e. An evaluation of the effectiveness of the leachate monitoring/control facilities.
3. A well drilling log shall be submitted for each sampling well established per this monitoring program, as well as a report of inspection or certification that each well has been constructed in accordance with the construction standards of the Department of Water Resources. These shall be submitted within 30 days after well installation.

## Part B

### 1. DESCRIPTION OF OBSERVATION STATIONS AND SCHEDULE OF OBSERVATIONS

#### A. On-site Observations:

STATION	DESCRIPTION	OBSERVATIONS	FREQUENCY
V-1 thru V-'n'	Located on the waste disposal area as delineated by a 500 foot grid network.	Standard observations for the waste management unit.	Monthly
P-1 thru P-'n' (perimeter)	Located at equidistant intervals not exceeding 1000 feet around the perimeter of the disposal area.	Standard observations for the perimeter.	Monthly

A map showing visual and perimeter compliance points (V and P stations) shall be submitted by the discharger in the quarterly monitoring report.

#### B. Receiving Waters Monitoring:

STATION	DESCRIPTION	OBSERVATION	FREQUENCY
R-1 thru R-n	Located in San Francisco Bay surrounding the landfill at 500 foot intervals	Standard observations for receiving waters	Monthly

#### C. Seepage Monitoring:

STATION	DESCRIPTION	OBSERVATION	FREQUENCY
S-1 thru S-'n' (seepage)	At any point(s) at which seepage is found occurring from the disposal area.	Standard observations for the perimeter, and standard analysis except "i"	Daily until remedial action is taken and seepage ceases.

STATION	DESCRIPTION	OBSERVATION	FREQUENCY
C-1 thru C-n (receiving waters)	Located in San Francisco Bay 50 feet bayward from where the seepage enters the bay.	Standard observation for receiving event. standard analysis except "i".	Daily, during a seepage

D. Groundwater Monitoring:

STATION	DESCRIPTION	OBSERVATION/ ANALYSIS	FREQUENCY
G-1  (ground-water back-ground)	To be installed by June 1, 1988	Standard analysis	Once per quarter.
G-2 thru G-n	"	"	"

E. Leachate Monitoring:

STATION	DESCRIPTION	OBSERVATION	FREQUENCY
L-1 thru L-'n'	Leachate control facilities including sumps and wells to be installed by June 1, 1988.	Depth of leachate built up in the land-fill, and volume removed. Standard analysis.	Once per quarter and at time of removal.

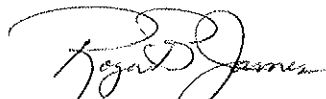
2. CONTINGENCY REPORTING

- A. A report shall be made in writing to the Regional Board within seven days if a statistically significant difference is found between a self-monitoring sample set and a WQPS. Notification shall indicate what WQPS(s) have been exceeded. The discharger shall immediately resample at the compliance point(s) where this difference has been found and analyze another sample set of at least four portions split in the laboratory from the source sample.

- B. If resampling and analysis confirms the earlier finding of a statistically significant difference between self-monitoring results and WQPS(s) the discharger must submit to the Regional Board within 90 days an amended Report of Waste Discharge for establishment of a verification monitoring program meeting the requirements of Section 2557 of Subchapter 15. This submittal shall include the information required in Section 2556(b)(2) of Subchapter 15.
- C. The discharger must notify the Regional Board within seven days if the verification monitoring program finds a statistically significant difference between samples from the verification monitoring program point of compliance and the WQPS(s).
- D. If such a difference or differences are found by the verification monitoring program it will be concluded that the landfill is out of compliance with this Order. In this event the discharger shall submit within 180 days an amended Report of Waste Discharge requesting authorization to establish a corrective action program meeting the requirements of Section 2558 of Subchapter 15. This submittal shall include the information required in Section 2557(g)(3) of Subchapter 15.
- E. A report shall be made by telephone of any seepage from the disposal area immediately after it is discovered. A written report shall be filed with this Board within five days. This report shall contain the following information: 1) a map showing the location(s) of discharge, 2) approximate flow rate, 3) nature of effects; i.e. all pertinent observations and analyses, and 4) corrective measures underway or proposed.

I, Roger B. James, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

- 1. Has been developed in accordance with the procedures set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 87-062.
- 2. Is effective on the date shown below.
- 3. May be reviewed or modified at any time subsequent to the effective date, upon written notice from the Executive Officer, or request from the discharger.

  
Roger B. James  
Executive Officer

JUNE 18, 1987  
Date Ordered